LISTING OF CLAIMS:

Claim 1 (currently amended): A **fuel cell comprising a peripheral fluid** separator for separating and distributing fluids at the periphery of a substantially planar membrane electrode assembly in a fuel cell, the membrane electrode assembly comprising first and second porous electrodes assembled onto opposing major surfaces of a substantially planar membrane electrolyte, the fuel cell comprising first and second flow field plates adjacent major surfaces of the first and second electrodes, respectively, the **peripheral fluid** separator comprising: (a) sealing surfaces for sealing engagement with the periphery of the membrane electrode assembly and with the first and second flow field plates; (b) a first port for providing passage of a first fluid through the **peripheral fluid** separator; and (c) a first set of fluid distribution features for fluidly connecting the first port to the flow field in the first flow field plate and for fluidly isolating the first port from the flow field in the second flow field plate**, wherein the peripheral fluid separator is bonded to the periphery of the membrane electrode assembly**.

Claim 2 (currently amended): The **peripheral fluid** separator of claim 1 further comprising: (d) a second port for providing passage of a second fluid through the fluid separator; and (e) a second set of fluid distribution features for fluidly connecting the second port to the flow field in the second flow field plate and for fluidly isolating the second port from the flow field in the first flow field plate.

Claim 3 (currently amended): The **peripheral fluid** separator of claim 1 wherein the first set of fluid distribution features comprises a plurality of channels

separated by lands for directing the first fluid to a plurality of channels in the first flow field plate.

Claim 4 (currently amended): The **peripheral fluid** separator of claim 2 wherein the second set of fluid distribution features comprises a plurality of channels separated by lands for directing the second fluid to a plurality of channels in the second flow field plate.

Claim 5 (currently amended): The **peripheral fluid** separator of claim 2 wherein the **peripheral fluid** separator is substantially planar and the first and second sets of fluid distribution features are on opposing major surfaces of the **peripheral fluid** separator.

Claim 6 (currently amended): The **peripheral fluid** separator of claim 1 wherein the first fluid is a reactant.

Claim 7 (currently amended): The **peripheral fluid** separator of claim 2 wherein the first and second fluids are fuel and oxidant respectively and the first and second electrodes are an anode and a cathode, respectively.

Claim 8 (currently amended): The **peripheral fluid** separator of claim 1 comprising a thermoplastic sheet.

Claim 9 (currently amended): The **peripheral fluid** separator of claim 8 wherein the thermoplastic is a polyimide.

Claim 10 (currently amended): The **peripheral fluid** separator of claim 8 wherein the first set of fluid distribution features is formed in the thermoplastic sheet.

Claim 11 (currently amended): The **peripheral fluid** separator of claim 8 wherein the first set of fluid distribution features is applied to the thermoplastic sheet.

Claim 12 (currently amended): The **peripheral fluid** separator of claim 11 wherein the first set of fluid distribution features comprises silicone.

Claims 13-14 (canceled).

Claim 15 (currently amended): The fuel cell of claim ~~14~~ 1 wherein the **peripheral fluid** separator is bonded to the membrane electrolyte in the membrane electrode assembly.

Claim 16 (currently amended): The fuel cell of claim ~~14~~ 1 wherein the **peripheral fluid** separator is bonded to first and second thermoplastic sheets and the thermoplastic sheets penetrate into and are bonded to the first and second porous electrodes respectively at the periphery of the membrane electrode assembly.

Claim 17 (currently amended): The fuel cell of claim 16 wherein the **peripheral fluid** separator is encapsulated by the first and second thermoplastic sheets.

Claim 18 (currently amended): The fuel cell of claim ~~14~~ 1 wherein the **peripheral fluid** separator is an extension of a fluid diffusion layer in one of the electrodes.

Claim 19 (currently amended): The fuel cell of claim ~~13~~ 1 wherein the **peripheral fluid** separator is bonded to the first flow field plate.

Claim 20 (currently amended): The fuel cell of claim ~~13~~ 1 wherein the membrane electrode assembly is rectangular.

Claim 21 (currently amended): The fuel cell of claim 20 comprising an additional **peripheral fluid** separator wherein the **peripheral fluid** separator and the additional **peripheral fluid** separator are sealingly engaged to opposite ends of the membrane electrode assembly.

Claim 22 (currently amended): The fuel cell of claim ~~13~~ 1 wherein the fuel cell is a solid polymer electrolyte fuel cell.

Claim 23 (currently amended): The fuel cell of claim ~~13~~ 1 wherein the flow field plate is corrugated.

Claim 24 (original): The fuel cell of claim 23 wherein the flow field plate is metallic.

Claim 25 (currently amended): A method of separating and distributing fluids in a fuel cell, the fuel cell comprising a substantially planar membrane electrode assembly having first and second electrodes assembled onto opposing major surfaces of a substantially planar membrane electrolyte, and first and second flow field plates adjacent major surfaces of the first and second electrodes respectively, the method comprising: (a) **bonding a peripheral fluid separator to the periphery of the membrane electrode assembly; (b)** forming a first port in ~~a~~ **the fluid** separator to allow a first fluid to pass therethrough; ~~(b)~~ **(c)** providing a first set of fluid distribution features in the **fluid** separator to fluidly connect the first port to the flow field in the first flow field plate and to fluidly isolate the first port from the flow field in the second flow field plate; and ~~(c)~~ **(d)** sealing the **peripheral fluid** separator to the periphery of the membrane electrode assembly and to the first and second flow field plates.

Claim 26 (currently amended): The method of claim 25 further comprising: ~~(d)~~ **(e)** forming a second port in the **peripheral fluid** separator to allow a second fluid to pass therethrough; ~~(e)~~ **(f)** providing a second set of fluid distribution features in the **peripheral fluid** separator to fluidly connect the second port to the flow field in the second flow field plate and to fluidly isolate the second port from the flow field in the first flow field plate.

Claim 27 (original): The method of claim 25 wherein the first set of fluid distribution features comprises a plurality of channels separated by lands for directing the first fluid to a plurality of channels in the first flow field plate.